

REMARKS

Applicant has carefully reviewed and considered the Non-Final Office Action mailed on July 15, 2005, and the references cited therewith.

Claims 1, 8, 14, 20 and 26 – 29 are amended, and claims 3, 10, 16, and 22 are canceled without prejudice. As a result, claims 1, 4 – 8, 11 – 14, 17 – 20 and 23 – 29 are now pending in this application. No new matter has been added by these amendments.

For the reasons discussed below, applicant respectfully asserts that the subject application is now in condition for allowance and do not require further consideration and/or search. Accordingly, applicant respectfully requests entry of the amendment pursuant to 37 CFR 1.111.

Claim Rejections – 35 U.S.C. §102

Claims 1, 8, 14, 20 and 26 – 29 were rejected under 35 U.S.C. §102(e) as being anticipated by Datta et al. (U.S. Patent No. 6,393,572, hereinafter “Datta”). Applicant respectfully traverses.

Applicant has amended independent claims 1, 8, 14 and 20 to incorporate the subject matter of dependent claims 3, 10, 16 and 22, respectively, and to provide further clarification to recite, “logic to selectively lower a speed of a clock signal from a first clock speed to a second clock speed corresponding with the sleep state, wherein the first clock speed controls the communication adapter to communicate with a transmission medium according to a first communication protocol having a first data transmission rate and the second clock speed controls the communication adapter to communicate with the transmission medium according to a second communication protocol having a second data transmission rate.” Applicant submits that Datta fails to disclose this limitation, either expressly or inherently.

Datta discloses “a master-slave configuration wherein a sleepmode activation is effected by the cessation of a clocking signal” (See Datta, Abstract). In particular, Datta discloses sleepmode activation in codec (COder-DECoder) devices. A master device or primary codec 121 provides the clocking signal 131 to slave devices or secondary codecs 122 – 123, and a power-down of the master device ceases the clocking signal to each of the slave devices (See

Datta, col. 2, lines 45 – 55). The sleep circuit 390 responds to the anticipated clock cessation signal 381 to place the device 320 into a power down sleep mode. (See Datta, col. 4, lines 55 – 61). The controlled power down takes effect after the cessation of the clock and that the slave device must be aware that the clock has stopped. (See Datta, col. 2, lines 62 – 66).

In contrast to Data, the present invention of independent claims 1, 8, 14 and 20 each require “selectively lowering a speed of the clock signal from a first clock speed to a second clock speed corresponding with the sleep state, the first clock speed controls the communication adapter to communicate with a transmission medium according to a first communication protocol having a first data transmission rate and the second clock speed controls the communication adapter to communicate with the transmission medium according to a second communication protocol having a second data transmission rate”.

For example, as described by the Applicant, “In response to receiving a sleep message from the power management system, the device driver may place the communication adapter 26 in a reduced power state by writing to a register in this interface to either specify a lower clock speed to control the one or more circuits of the communication adapter 16 or specify a communication protocol using less power.” (See Applicant’s patent application publication, page 4, paragraph 40).

Simply stated, nowhere does Datta teach, suggest, or disclose selectively lowering a speed of the clock signal from a first clock speed to a second clock speed corresponding with the sleep state to provide communication using a first communication protocol and a second communication protocol. In other words, while Datta does teach the use of different clock speeds, nowhere does Datta teach using different communication protocols depending on the clock speed.

Because Datta fails to identically teach, suggest, or disclose the system, article, method, and apparatus recited in amended independent claims 1, 8, 14 and 20, applicant submits that these claims are not anticipated by Datta. Accordingly, applicant respectfully requests that the rejection under 35 U.S.C. §102(e) be withdrawn.

Claims 26 – 29 depend on claims 1, 8, 14, and 20 respectively. Applicant respectfully submits claims 26 – 29 are also allowable by virtue of its dependency from claims 1, 8, 14, and 20 in addition to its own further limitations.

Claim Rejections – 35 U.S.C. §103

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Gregorian et al. (U.S. Patent No. 6,393,572, hereinafter “Gregorian”). Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Huang et al. (U.S. Patent No. 6,407,595, hereinafter “Huang”). Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Gregorian, and further in view of Huang. Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Foster (U.S. Patent No. 6,026,494). Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Gregorian, and further in view of Greszczuk et al. (U.S. Patent No. 6,445,730). Claims 10, 16 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Gregorian. Claims 11, 17 and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Huang. Claims 12, 18 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Gregorian, and further in view of Huang. Claims 13, 19 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Datta in view of Foster.

The deficiencies of Datta vis-à-vis applicant’s invention of independent claims 1, 8, 14 or 20 are discussed above in detail. Under the Examiner’s §103, it should be noted that each of these rejected claims depend directly or indirectly from Applicant’s invention of independent claims 1, 8, 14 or 20 (as the case may be).

Datta, Gregorian, Huang, Foster, and Greszczuk, taken singly or in combination, all fail to teach, suggest, or disclose a system comprising:

- a processing system comprising memory; and
- a communication adapter adapted to be coupled to a transmission medium, wherein the processing system further comprises:
 - logic to receive a sleep message from a power management system;
 - logic to place the communication adapter in a sleep state in response to the sleep message; and
 - logic to selectively lower a speed of a clock signal from a first clock speed to a second clock speed corresponding with the sleep state, wherein the first clock speed controls the communication adapter to communicate with a transmission medium according to a first communication protocol having a first data transmission rate and the

second clock speed controls the communication adapter to communicate with the transmission medium according to a second communication protocol having a second data transmission rate;

the communication adapter is adapted to save data local to the communication adapter in the memory prior to transitioning to the sleep state.

The Examiner relies on Gregorian as teaching a system for selectively lowering the speed of the clock from a first clock speed, wherein the first clock speed controls the communication adapter to communicate with a transmission medium according to a first protocol and the second clock speed controls the communication adapter to communicate with the transmission medium according to a second protocol. The Examiner further relies on Huang as teaching a system that comprises logic to determine the speed of the clock signal in response to a message and logic to selectively lower the speed of the clock signal if the speed of the clock signal exceeds a predetermined clock speed.

In order to establish a prima facie case of obviousness, the prior art must teach all of the claimed limitations and must provide a motivation for any combination of teachings from multiple references. Here, applicant submits that at least Gregorian and Huang cannot be properly combined with Datta. As mentioned above, Datta discloses a master-slave configuration wherein a sleep circuit responds to the anticipated clock cessation signal to place the device into a power down sleep mode. The controlled power down takes effect after the cessation of the clock and that the slave device must be aware that the clock has stopped.

In contrast, Gregorian discloses an automatic frequency rate switch for changing a frequency rate of semiconductor chip. Huang discloses digital clock throttling, i.e., changing a clock speed of an integrated circuit. To merely change frequency rates or clock speeds in Datta, instead of ceasing a clock signal, would prevent the sleepmode activation in Datta. Thus, it would be inappropriate to combine these references.

Further, Huang teaches away from reducing the power consumption by turning off some function inherent in the integrated circuit, thereby anticipating clock cessation into a power down sleep mode. According to Huang, turning off some function in the integrated circuit causes some serious disadvantages. For example, in a graphics chip, if some functions were suspended, the pictures on the display would be interrupted.

Therefore, the proposed modification of Datta would render the system of Datta unsatisfactory for its intended purpose and would not have been obvious. See MPEP 2143.01.

In rendering the proposed modification of Data unsatisfactory for its intended purpose, Gregorian and Huang cannot be considered as suggesting a motivation to combine the teachings of the references or any modification of the teachings.

Additionally, Foster and Greszczuk cannot be properly combined with Datta. Foster discloses an auto-negotiating Ethernet transceiver by enabling a driver for the transceiver to alternate between a higher power energy consumption mode to a lower-power energy consumption mode until network link is detected. The driver alternate between power energy consumption mode by going through a series of steps as shown in Figure 3, including setting a timer and determining whether or not the value of a timer is greater than equal to a variable which has been set to a predetermined value.

On the other hand, Greszczuk discloses a multicarrier transmission system having a low power sleep mode and a rapid on capability. The system can rapidly switch from a sleep mode to a full on condition. The power down operation as shown in Figure 2, in relevant portion, is an interaction between a CPE transceiver and a CO transceiver transmitting power down notification. In both Figure 3 of Foster and Figure 2 of Greszczuk do not utilize a sleep circuit responding to the anticipated clock cessation signal to place the device into a power down sleep mode as required in Data. Thus, the proposed modification of Datta would render the system of Datta unsatisfactory for its intended purpose and would not have been obvious. See MPEP 2143.01. In rendering the proposed modification of Datta unsatisfactory for its intended purpose, Foster and Greszczuk cannot be considered as suggesting a motivation to combine the teachings of the references or any modification of the teachings.

Moreover, none of these secondary references disclose the claimed limitation missing from Datta, namely, selectively lower a speed of a clock signal from a first clock speed to a second clock speed corresponding with the sleep state, wherein the first clock speed controls the communication adapter to communicate with a transmission medium according to a first communication protocol having a first data transmission rate and the second clock speed controls the communication adapter to communicate with the transmission medium according to a second communication protocol having a second data transmission rate, as recited in independent claims

1, 8, 14 and 20. Because the dependent claims depend directly or indirectly from independent claims 1, 8, 14 or 20, the dependent claims incorporate this limitation from the independent claims. See 35 U.S.C. §112, 4th paragraph. For this additional reason, applicant submits that the Office action fails to set forth a *prima facie* case of obviousness.

Accordingly, applicant requests that the rejections under 35 U.S.C. §103 be withdrawn.

Conclusion

Having dealt with all the objections and/or rejections raised by the Examiner, it is respectfully submitted that the present application, as amended, is in condition for allowance. Thus, allowance is earnestly solicited.

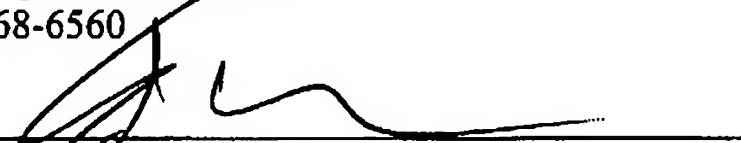
If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603-668-6560. In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

Respectfully submitted,
Soubhi Abdulkarim

By their Representatives,

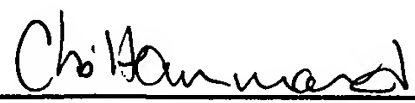
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6 day of October, 2005.

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